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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,460	05/28/2002	David Mendlovic	141/02527	9160

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EXAMINER

LEE, JOHN D

ART UNIT PAPER NUMBER

2874

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,460

Applicant(s)

MENDLOVIC ET AL.

Examiner

John D. Lee

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 42-45 is/are allowed.
- 6) ☒ Claim(s) 1-4, 26, 28-30, and 36-39 is/are rejected.
- 7) ☒ Claim(s) 5-25, 27, 31-35, 40, and 41 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1202.0803.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. §§ 119(a)-(d) or (f) based on an application filed in Israel on May 3, 2000. It is noted, however, that a copy of the certified copy of the Israeli application has not yet been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

The three (3) sheets of formal drawing filed with this application are acceptable.

The specification has not been studied to the extent necessary to determine all possible minor errors therein. Applicant's cooperation is requested in correcting any errors of which applicant may become aware.

Claims 23, 31, 37, and 42 are objected to because of the following minor deficiencies. Appropriate correction is required. In claim 23, line 3, the term "of the" is repeated and should be deleted. In claim 31, line 1, "particles" should actually be "elements" in order to have correct antecedent agreement. In claim 37, line 1, the word "and" should be deleted. In claim 42, line 5, the word "is" should be deleted.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 26, 28-30, and 36-39 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by European Patent 0 547 594 A1 (Texas Instruments Inc.). See especially Figures 5 and 6. This reference discloses a signal processor and method for transforming a first vector into a second vector, comprising a plurality of linear light sources (waveguides 80), each of which provides light having an intensity responsive to a

different component of the first vector¹⁴; a spatial light modulator 12 comprising a plurality of modulation zones, each of which zones receives light from substantially only one of the light sources and transmits light in proportion to a transmittance that characterizes the modulation zone; and a plurality of light detectors (on board 10), one for each component of the second vector, the detectors receiving light transmitted from the modulation zones, each detector being illuminated by light from a different light source, the detectors generating signals that are responsive to the received light and representing components of the second vector. Note that everything is arranged in the Texas Instruments reference in rectangular arrays of rows and columns. The transmittance of each modulation zone in the spatial light modulator is fixed. Although not shown in the reference drawings, there must be a light emitter coupled to a distal end of each waveguide 80 to supply the light. There would inherently be some light scattering within the interior of each waveguide 80 and, thus, some scattering elements.

Claims 5-25, 27, 31-35, 40, and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In the Texas Instruments reference, each detector for a second vector component does not receive light from all the modulation zones in a different one of the rows of modulation zones, and this would not be possible in the reference without extensive modification thereof. There is also no teaching or suggestion in this reference of adjustment of relative amounts of light from any two light sources, no teaching or suggestion of adjustment of desired transmittances of modulation zones, no teaching or suggestion of adjustment of relative sensitivities of any two detectors, and no teaching or suggestion of making a ratio of areas of any two

modulation zones illuminated by a same light source to be inversely proportional to the relative amounts of light that the zones receive from the light source. Further, the specific structural details of claims 31-35, 40, and 41 are neither disclosed nor suggested by the Texas Instruments reference.

Claims 42-45 are allowed. The prior art does not disclose or reasonably suggest wavelength conversion within a light pipe, wherein the original transmitted (unconverted) signal is of a wavelength which is not substantially reflected by the light pipe but is converted therewithin to light of a wavelength which is highly reflected by the light pipe, or (with respect to claim 43) to light of a wavelength which is not transmitted through junctions between first, second, and third light pipes.

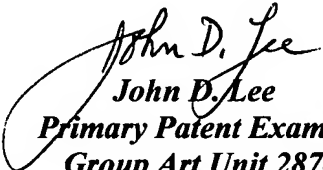
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,590,367 to Lin et al is the U.S. Patent which corresponds to European Patent 0 547 594 A1 (Texas Instruments Inc.) relied on in the rejection above. U.S. Patent 3,889,233 to Ogiwara describes a somewhat related signal processor and vector transformer.

All of the prior art documents submitted by applicant in the Information Disclosure Statements filed on December 20, 2002, and August 8, 2003, have been considered and made of record. Note the attached initialed copy of forms PTO-1449.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not

commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. §§ 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

Any inquiry concerning the merits of this communication should be directed to Examiner John D. Lee at telephone number (571) 272-2351. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562, to the technical support staff supervisor (Team 2) at telephone number (571) 272-1564, or to the Technology Center 2800 Customer Service Office at telephone number (571) 272-1626.


John D. Lee
Primary Patent Examiner
Group Art Unit 2874